SYNCHRONOUS LEFT URETEROSTOMY AND RIGHT NEPHROSTOMY FOR HYDRONEPHROSIS DUE TO URETER OBSTRUCTION BY BLADDER TUMOR. PERMANENT DRAINAGE.

DR. F. TILDEN BROWN presented a man, twenty-three years of age, who six years ago had an attack of measles, and since then, at periods of from three to four months, he had had attacks of pain in the bladder, perineum and penis; these lasted two or three hours and were relieved by a warm bath. He was examined by physicians in Germany for admission to the Army, and was said to have had pulmonary tuberculosis. After treatment he was pronounced cured, and he had had no pulmonary symptoms since that time. His family history was negative. He gave no venereal history. All subsequent observation supports this negation.

On April 16, 1907, without previous symptoms, he was suddenly awakened by a severe suprapubic and perineal pain radiating to the tip of the penis. Urination was very difficult and accompanied by much blood. The pain was severe and persistent, requiring hypodermics of morphine. When he was admitted to the Presbyterian Hospital, on the same day, he was still having severe pain and was passing small amounts of bloody urine, voluntarily and involuntarily. A catheter was introduced and twenty ounces of bloody urine withdrawn. Examinations for stone and X-ray exploration of the kidneys and bladder were negative.

Repeated tests for tuberculosis of the genito-urinary tract were negative. Physical examination showed tenderness and rigidity over the bladder region. The prostate, by rectal examination, appeared normal, except at its upper limits and the tissues beyond.

Three days after admission the patient had a similar attack, with pain referred to the tip of the penis, and followed by bloody urine. Four days later, a more thorough examination revealed a larger mass per rectum; it was just above the prostate, hard, irregular and tender, seemingly involving the posterior bladder wall and seminal vesicles. A cystoscopic examination, made by Drs. McWilliams and Osgood, showed a large sessile hemispherical tumor, with an irregular and ulcerated surface, involving the base of the bladder, encroaching upon the ureters, especially

the left, and extending to the lateral aspects of the bladder. The patient's general condition grew worse; his pain was more severe, radiating down the thighs and most marked in the flanks in each kidney and ureter region. It was evident that both ureters were at times obstructed, and that this intermittent hydronephrosis was the cause of principal suffering. An operation for its relief, and in anticipation of a subsequent radical operation on the bladder, was offered, wherein a renal outlet would be provided for in each ilio-costal space.

On April 27, 1907, with the patient prone on the face and large supports under the abdomen to lift and extend the loins, the left kidney and ureter were exposed, and the latter was ligated and cut and stripped from its peritoneal attachment five inches below the kidney. The severed ureter was then brought to the surface and fastened by means of chromic sutures to the skin. A small soft rubber catheter was inserted to the renal pelvis and secured to insure drainage and prevent the wound from becoming soiled. The wound was then sutured and a superficial cigarette drain inserted.

The right kidney was then operated on. Here the ureter was left intact, and a nephrostomy done by blunt scissors passed into the pelvis through the cortex and parenchyma from the convex border just below its middle. An angled, soft rubber catheter was pushed through this kidney wound into its pelvis for drainage. About two weeks after the operation there was a profuse discharge of most offensive necrotic material from the bladder through the urethra, and the tumor previously felt by rectum seemed smaller but still with resisting, undulating wall. Irrigation of the bladder gave evidence of extensive breaking down of tissue. From the first, and ever since, the drainage from the left kidney has been more satisfactory than that from the right, *i.e.*, the side on which the catheter entered the renal pelvis through part of the ureter. For four or five weeks some of the right kidney urine found exit through the ureter, bladder and urethra; subsequently all drainage ceased by the bladder and the urine was drained through the nephrostomy wound by means of the right-angled catheter, held in place by adhesive, and led into one of the two bottles suspended on the flanks from the shoulder. Later, the bottles were suspended in front, just above the groin by means of a sling about the neck. This

again was subsequently improved by using a long rubber receptacle suspended from the pubic region and worn inside the leg of the trousers, to the top of which was fitted a hard-rubber nut into which was screwed a metal Y-shaped tube to the upper branches of which the catheters were attached. This apparatus perfected and adjusted by Dr. Keator was suspended by webbing from the neck and held to the body by a belt of the same material about the hips. The drainage was perfect, and management of the single large urinal was much easier for the wearer than any of the former devices. At night the patient connects each catheter with a short tube entering a bottle on each side of the bed. The bed clothes are not even moistened by any leakage. No urine is passed by the bladder. The catheters are removed every second day, and fresh sterilized ones inserted.

A cystoscopic examination, made on July 21, 1907, showed that the bladder would tolerate only two ounces of fluid, greater distention was very painful, and a complete disappearance was noted of the tumor previously seen. There was no ulceration, but outside of the left ureteral orifice there was a dark area of depression, suggesting the former site of part of the tumor. The left ureteral mouth looked normal. The right one was surrounded by a slight hyperemic and elevated zone, and there were several places on the base of the bladder which suggested small healed ulcers. A rectal examination showed some thickening of the bladder floor above the prostate. The patient is now in good health; he has gained in weight, and has had no discomfort from the apparatus excepting that incidental to the dressings.

There remain several interesting considerations in the future management of this case, the most important being a diversion of the right kidney urine to the bladder again, through the intact right ureter, and closure of the nephrostomy sinus. The fact that the etiology and exact point of origin of the tumor are still undetermined makes it seem advisable to defer yet awhile any change from the existing satisfactory condition. But in anticipation of this restitution of normal right side urinary functions, vesical irrigations have been commenced with the hope that distensibility and contractility of this viscus may be regained and ready to be utilized.

In this patient as with a former case of nephrostomy it was found that the only certain way to determine with an instrument

that the renal pelvis was accurately occupied by the drainage catheter was to slit the ureter near the pelvis for insertion of delicate curved forceps which was then pushed through pelvis or central calyx and on through parenchyma and cortex here to grasp the catheter and draw it back into the pelvis. Removing forceps to suture the ureteral slit. The kidneys in these nephrostomy cases are apt to have normal pelves, small, collapsed envelope-like spaces, gaining an instrumental entrance to which from the surface of the kidney is fraught with uncertainty. The instrument is as apt to bring up at the hilum *outside* the pelvis walls, as *between* these two closely opposed surfaces. The finger, of course, might be a reliable guide, but kidney puncture by so large an object is unnecessarily damaging.

TUBERCULOSIS OF THE TESTIS.

Dr. F. Tilden Brown presented a man, 34 years old, a machinist by occupation. His immediate family history was good, but four of his uncles had died of pulmonary tuberculosis. He had formerly used alcohol to excess. When he was nine years old he had an attack of hematuria lasting one day, for which no cause could be assigned. About that time he was said to have had repeated attacks of malaria. When he was thirteen years old he began to lose flesh, and developed a cough, with bloody expectoration. He was sent to the country for four months, where he gained decidedly in weight and strength.

Ten years ago the left testicle became swollen, red and painful. Within a month it broke down and discharged, the sinus healing in three months without any treatment. The testis, however, still remained swollen and tender, and three months later it broke down again. At that time the patient was having frequent nightsweats; he felt weak and was losing weight. The testis was curetted with good result.

On August 15, 1907, "after a heavy lift," the right testis became swollen, but not painful. It was five inches in length and three and a half inches in diameter. It subsequently broke down and discharged, leaving a circular ulcer. The patient still had nightsweats at irregular intervals. He was admitted to Bellevue Hospital on October 8, 1907. His temperature at that time varied but little from the normal. The main interest then was a differential diagnosis between gummatous, cancerous, tuberculous ulcer